

L10 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:656721 CAPLUS

DN 139:199086

TI Processes for the purification and production of fluoroalkanes

IN Brandstater, Stephan M.; Cohn, Mitchel; Hedrick, Victoria E.; Iikubo, Yuichi

PA PCBU Services, Inc., USA

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003068716	A1	20030821	WO 2003-US3962	20030211
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003164283	A1	20030904	US 2002-75560	20020214
	EP 1474370	A1	20041110	EP 2003-707831	20030211
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

PRAI US 2002-75560 A 20020214

WO 2003-US3962 W 20030211

AB Processes that utilize an olefinic compound, in particular, hexafluoropropene (HFP) or chlorotrifluoroethene (CFC-1113) as extracting agents in the purification of pentafluoroethane (HFC-125) are described. These processes can utilize recovered HFP as a precursor for the production of heptafluoropropene (HFC-227) or other derivs.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:534048 CAPLUS
 DN 141:89877
 TI Materials and methods for the conversion of hydrofluorocarbons to fluoromonomers
 IN Iikubo, Yuichi; Hedrick, Vicki; Brandstadter, Stephen M.; Cohn, Mitchel
 PA USA
 SO U.S. Pat. Appl. Publ., 11 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004127757	A1	20040701	US 2002-331821	20021230
	WO 2004060842	A1	20040722	WO 2003-US41851	20031230
	WO 2004060842	C1	20041021		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
PRAI	US 2002-331821	A2	20021230		
AB	Methods and materials for the recovery of valuable hydrofluorocarbons and subsequent conversion to fluoromonomer precursors and fluoromonomers are disclosed. More specifically methods and materials are provided for recovering hydrofluorocarbons such as HFC-227, HFC-236, HFC-245, HFC-125, HFC-134, HFC-143, HFC-152, HFC-32, HFC-23 and their resp. isomers. Processes are provided for converting hydrofluorocarbons such as these to fluoromonomer precursors such as CFC-217, CFC-216, CFC-215, CFC-115, CFC-114, CFC-113, CFC-112, HCFC-22, CFC-12, CFC-13 and their resp. isomers. Materials, methods, and schemes are provided for the conversion of these fluoromonomer precursors to fluoromonomers such as HFP, PFP, TFP, TFE, and VDF. One example demonstrates the conversion of HFC-227 to CFC-217 and finally to hexafluoropropene.				

(FILE 'HOME' ENTERED AT 14:56:37 ON 24 JAN 2005)

FILE 'REGISTRY' ENTERED AT 14:57:09 ON 24 JAN 2005

E HFC 227EA
E 1,1,1,2,3,3,3-HEPTAFLUOROPROPANE

L1 84 S E3
L2 1 S 1,1,1,2,3,3,3-HEPTAFLUOROPROPANE/CN
E 1,1,1,2,2,3,3-HEPTAFLUOROPROPANE
L3 5 S E3
L4 1 S 1,1,1,2,2,3,3-HEPTAFLUOROPROPANE/CN

FILE 'CAPLUS, CAOLD' ENTERED AT 15:01:55 ON 24 JAN 2005

L5 877 S L2
L6 1096 S L1
L7 221 S L4
L8 245 S L3
L9 84 S L5 AND L7
L10 1 S L9 AND DISTILL?
L11 1 S L9 AND SEPARAT?
L12 84 DUP REM L9 (0 DUPLICATES REMOVED)
L13 17 S L12 AND ?CHLOROFUORO?
L14 67 S L12 NOT L13
L15 1 S L10 NOT L11
L16 66 S L14 NOT L10
L17 65 S L16 NOT L11
L18 0 S L17 AND PURIF?

FILE 'REGISTRY' ENTERED AT 15:09:53 ON 24 JAN 2005

L19 1 S 1-CHLORO-1,1,2,2,3,3,3-HEPTAFLUOROPROPANE/CN
L20 1 S 2-CHLORO-1,1,1,2,3,3,3-HEPTAFLUOROPROPANE/CN

FILE 'CAPLUS, CAOLD' ENTERED AT 15:12:38 ON 24 JAN 2005

L21 1 S L17 AND L19
L22 2 S L17 AND L20
L23 5 S L17 AND ISOMER?
L24 0 S L17 AND PURIF?
L25 0 S L17 AND DISTILL?
L26 0 S L17 AND SEPARAT?
L27 7 S L17 AND AZEOTROP?
L28 7 S L27 NOT L23

L19 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:534048 CAPLUS
DN 141:89877
TI Materials and methods for the conversion of hydrofluorocarbons to fluoromonomers
IN Iikubo, Yuichi; Hedrick, Vicki; Brandstadter, Stephen M.; Cohn, Mitchel
PA USA
SO U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004127757	A1	20040701	US 2002-331821	20021230
	WO 2004060842	A1	20040722	WO 2003-US41851	20031230
	WO 2004060842	C1	20041021		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU			
	RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRAI US 2002-331821 A2 20021230

AB Methods and materials for the recovery of valuable hydrofluorocarbons and subsequent conversion to fluoromonomer precursors and fluoromonomers are disclosed. More specifically methods and materials are provided for recovering hydrofluorocarbons such as HFC-227, HFC-236, HFC-245, HFC-125, HFC-134, HFC-143, HFC-152, HFC-32, HFC-23 and their resp. isomers. Processes are provided for converting hydrofluorocarbons such as these to fluoromonomer precursors such as CFC-217, CFC-216, CFC-215, CFC-115, CFC-114, CFC-113, CFC-112, HCFC-22, CFC-12, CFC-13 and their resp. isomers. Materials, methods, and schemes are provided for the conversion of these fluoromonomer precursors to fluoromonomers such as HFP, PFP, TFP, TFE, and VDF. One example demonstrates the conversion of HFC-227 to CFC-217 and finally to hexafluoropropene.

L19 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:20676 CAPLUS
DN 116:20676
TI Multistep synthesis of hexafluoropropylene from propane and propylene
IN Webster, James Lang; McCann, Elrey Lorne; Bruhnke, Douglas William; Lerou, Jan Joseph; Manogue, William Henry; Manzer, Leo Ernest; Swearingen, Steven Henry; Trofimenko, Swiatoslaw; Bonifaz, Cristobal
PA du Pont de Nemours, E. I., and Co., USA
SO Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 434409	A1	19910626	EP 1990-313951	19901219
	EP 434409	B1	19941012		
	R: DE, FR, GB, IT				
	US 5057634	A	19911015	US 1989-452402	19891219
	CA 2032273	AA	19910620	CA 1990-2032273	19901214
	CA 2032273	C	20020122		

CA 2298099	C	20020108	CA 1990-2298099	19901214
JP 04145033	A2	19920519	JP 1990-411690	19901219
JP 2613683	B2	19970528		
PRAI US 1989-452402	A	19891219		
CA 1990-2032273	A3	19901214		

AB Hexafluoropropylene (I) is prepared by (1) chlorofluorination of at least one of propane, propylene, and partially halogenated C₃ acyclic hydrocarbons with HF and Cl in the presence of a chlorofluorination catalyst to produce CF₃CFClCF₃ (II) and other chlorofluorocarbons such as C₃F₄Cl₄, C₃H₅Cl₃, CF₃CFClCF₂Cl, CF₃CCl₂CF₃, and CF₃CCl₂CCl₃ which are mostly recyclable to the same chlorofluorination step to give II and (2) dehalogenation of II to form I in the presence of a CuO-NiO-Cr₂O₃-CaF₂ (and-MoO₃) catalyst containing at least one of K, Cs, or Rb. In this process there is substantially no perfluoroisobutylene produced as a byproduct which is extremely toxic and is costly to remove and destroy. Thus, Cr₂O₃.3H₂O was charged to an Inconel tubular reactor and treated with a flow of HF at 400° for dehydration and thereto HF 90, Cl 35, and propylene 1.5 mol/h were fed at 440° and 790 kPa to give II 75, C₃F₆Cl₂ 7, C₃F₅Cl₃ 5, C₃F₇H 3, C₃F₆ClH 5, C₃F₈ 2 and C₂F₅Cl 2%. A 1:1 (mol) mixture of H and a II feed containing II 79, CF₃CF₂CF₂Cl 17, and CF₃CCl:CF₂ 0.7% was passed over a catalyst CuO/NiO/Cr₂O₃/2.7 CaF₂ containing 7.9 weight% K at 402° to give 97% I with 63% conversion of II.